

## ABSTRACT OF THE DISCLOSURE

A precoding-multiplexing circuit is formed by a precoding circuit for carrying out a precoding with respect  
5 to  $n$  sets of parallel input binary data signals having a  
bit rate equal to  $R/n$ , to obtain  $n$  sets of parallel  
precoded signals, and a time division multiplexer for time  
division multiplexing the parallel precoded signals  
obtained by the precoding circuit, in units of one bit, and  
10 outputting time division multiplexed output signal having a  
bit rate equal to  $R$ . In this configuration, the encoding is  
realized by processing electric signals before the time  
division multiplexing, so that it becomes possible for the  
precoding circuit to handle signals which are slower than  
15 the transmission rate, and therefore it becomes easier to  
realize the higher transmission rate.

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